of the pulse is only relative. Even in health the successive beats of the heart show rather marked irregularity, the causes of which cannot as yet be explained. They make it impossible, however, to define the limit of the physiological rhythm. On the other hand, aside from these variations, the heart shows a marked tendency to preserve its rhythmic action, even in the face of severe general disease or of lesions of the valves. For the production of arhythmia causes as yet unknown must act on the cardiac mechanism.

IRON IN THE TISSUES IN ANÆMIA.

STÜHLEN (*Deutsches Archiv für klin. Med.*, Bd. 54, S. 248) has investigated this subject recently in Quincke's clinic, using material from six cases having the clinical characteristics of pernicious anæmia and eight cases of severe secondary or mixed anæmia. The usual tests for iron were applied to the liver, spleen, kidneys, bone-marrow, and pancreas. These results are summarized as follows: 1. In most cases of severe anæmia, especially in pronounced pernicious anæmia, iron is deposited in the liver and spleen, and frequently also in the kidneys. 2. In some cases iron granules are deposited in the bone-marrow; in others not. 3. In severe anæmias due to repeated hemorrhages or exhausting discharges the organs mentioned give little or no iron-reaction. 4. In their extremes the cases of different kinds can be distinguished anatomically by the presence or absence of iron. 5. Less characteristic features are found in cases of uncertain origin, in which the clinical picture may resemble pernicious anæmia.

THE PATHOLOGY OF LEUKÆMIA.

Under the somewhat misleading title, "Changes in the Organs in Leukæmia," HINDENBURG (*Deutsches Archiv für klin. Med.*, Bd. 54, S. 209) announces a theory of the pathology of leukæmia, based partly on the examination of three cases before and after death, partly on conceptions of the origin of leucocytes not yet positively demonstrated. Hindenburg holds that in leukæmia the mitotic increase of a certain kind of leucocytes goes on in a pathological manner as the result of a cause ("noxa") as yet unknown. Usually the myelocytes are involved, sometimes other varieties of leucocytes. The cause of this predilection is quite unknown. Indirect division of the leucocytes affected takes place in the lymphoid organs, especially in the capillaries of the liver and in lymphatic new-growths, and in many cases in the greater circulation. The germinal centres take part in the increase only in lymphatic leukæmia. Different localizations of the leukæmic process seems to depend on the fact that various kinds of leucocytes show a preference for certain parts of the lymphatic apparatus. The newly formed cells enter the blood partly by way of the lymph-channel, partly directly, as in the spleen and bone-marrow. Entering the circulation and increasing there to some extent, the leukæmic blood is the result. The fact that besides the forms found in the organs in increased numbers other kinds of leucocytes occur in increased numbers in leukæmia, the author explains by a transformation of the former before undergoing dissolution. The question whether leukæmia is a disease of the blood or of the blood-forming organs the author thinks an idle one, since the fluid tissue called blood and the hematopoietic organs cannot be sharply separated. Finally, the author states that the idea that the leukæmic condition of the blood is due to decreased leucolysis is contradicted by his finding in the organs numbers of bodies which he thinks are degeneration-forms of leucocytes.

EXCRETION OF URIC ACID AND XANTHIN-BASES IN THE FECES.

A valuable contribution to the study of these important substances is made by WEINTRAUD (*Centralblatt für inner. Med.*, 1895, No. 18). His attention was called to the matter by examining the feces of a case of leukæmia for xanthin-bases and finding these in very large amount, being present in fact to about ten times the quantity excreted normally by the urine. Smaller quantities were constantly found in the feces of healthy persons, and of those sick with various diseases, so that Weintraud claims the xanthin-bases are normal constituents of feces. That these do not come already formed from food, or from nucleins in the food, the author demonstrated by feeding large quantities of food rich in nuclein (thymus) and finding that latter absorbed. The important discovery was made that the excretion of uric acid was enormously increased. It was also found that even after absolute milk-diet (in which xanthin-bases have not yet been found) these were nevertheless present in the feces. Xanthin-bases and uric acid were also found in the meconium of an infant with *atresia ani.* It would therefore appear that xanthin-bases (hypoxanthin being the chief form) are excreted either from the wall of the intestine or the glands which pour their secretions into the intestine. Incidentally the observations demonstrate the absorbability of nucleins in the intestine, the possibility of which has been denied by some.

CIRRHOSIS OF THE LIVER APPARENTLY CHECKED BY TAPPING.

LAUENSTEIN reported two cases of the above kind in the Aerztl. Verein in Hamburg (*Deutsches med. Wochenschrift*, 1895, No. 19. Vereins-Beilage, No. 13, p. 82). One case had a clear history of abuse of alcohol; in the other this was probable. In both cases the liver was enlarged. In the first case, after six tappings, the fluid did not reaccumulate during the two and a half years which had elapsed at the time the report was made. The patient had continued to use wine and beer, and had passed through an attack of delirium tremens. The liver became smaller. [The spleen was not enlarged at any time.] In the second case tapping was performed three times, after which the patient remained apparently well for several years. The liver became smaller. The spleen was large in the beginning and remained so.

THE CAUSE OF MURMURS IN THE HEART AND VESSELS.

It is well known that current explanations of the cause of cardiac and vascular murmurs in works on physical diagnosis ascribe these to eddies in the blood-current, although Kiwisch and T. Weber showed long ago that they must be due to vibrations in the walls of the vessels (or in the valves). This explanation is also given by Fick in his recent "Lehrbuch der medicinischen Physik," and there have always been a few clinicians who have held to this